CLAIM AMENDMENTS

1 - 17. (canceled)

18. (previously presented) A rotary coupling comprising:

a nonrotatable stator having a stator passage with an end opening along an axis;

a rotor rotatable on the stator about the axis and having a rotor passage with an end axially confronting the stator end;

a rotor seal on and rotatable with the rotor end about the axis;

a stator seal on and rotationally fixed to the stator end and bearing axially on the rotor seal, whereby the rotor seal rotates on the stator seal on rotation of the rotor;

a strain element that changes size in response to temperature in the stator adjacent the seals; and

means coupling the strain element to one of the seals for shifting the one seal relative to the other seal in response to temperature changes adjacent the seals.

19. (previously presented) The coupling defined in claim 18 wherein the one seal is shifted away from the other seal on an increase of temperature adjacent the seals.

20. (previously presented) The coupling defined in claim 18 wherein the strain element is a sleeve generally coaxially surrounding the seals and having one end fixed axially to the stator and an opposite end operatively axially engaging the stator seal via the coupling means.

21. (previously presented) The coupling defined in claim 20 wherein the coupling means is a coupling ring fixed axially between the opposite end of the sleeve and the stator seal.

22. (previously presented) The coupling defined in claim 21, further comprising a spring pressing the coupling ring axially against the strain element.

23. (previously presented) The coupling defined in claim 21 wherein the coupling means further comprises

a seal support holding the stator seal and engaged between the stator seal and the coupling ring; and

a stator spring pressing the seal support and stator seal axially toward the rotor seal.

24. (currently amended) The coupling defined in claim 23 wherein the seal support has a portion surrounded by the coupling ring and at a predetermined [[low]] temperature spaced by a radial gap from the coupling ring, the coupling ring being of a material with a lower coefficient of friction than the portion of the seal support such that when heated above the predetermined temperature the stator support expands and closes the radial gap and couples the seal support with the coupling ring.

25. (previously presented) The coupling defined in claim 23 wherein the seal support has an end tapered toward the rotor seal.

26. (previously presented) The coupling defined in claim 23 wherein the stator has centered on the axis a bore in which a portion of the seal support slides and a bore in which the rotor turns, both bores being of substantially the same diameter.

27. (previously presented) The coupling defined in claim 20 wherein the sleeve has an inner surface provided with a heat-absorbing coating.

28. (previously presented) The coupling defined in claim 18, further comprising

a bearing supporting the rotor in the stator, the stator being formed with inwardly open grooves flanking the bearing; and

means for supplying a fluid under pressure to the grooves.

29. (previously presented) The coupling defined in claim 18 wherein the coupling means includes

a temperature-sensitive element for connecting the strain element with the stator seal only when a temperature at the seals exceeds a predetermined threshold temperature.

30. (previously presented) The coupling defined in claim 29 wherein the temperature-sensitive element is spiral-shaped and bimetallic and has one end connected to the stator and an opposite end, whereby the bimetallic-element ends shift angularly relative to each other as a temperature of the bimetallic element changes, the coupling means further comprising

a pair of disks one of which is connected to the opposite end of the bimetallic element and to the strain element and the other of which is connected axially to the stator seal; and

formations between the pair of disks engageable with each other to axially couple the disks with each other on rotating of the one disk by the bimetallic element on temperature increase of the bimetallic element, whereby the disks are only coupled to each other to transmit movement from the strain element to the stator seal when the temperature of the bimetallic element exceeds a predetermined threshold temperature.

31. (previously presented) The coupling defined in claim 18 wherein the coupling means includes

a coupling ring axially engaging the strain element; and

a strain-relief ring surrounded by the coupling ring and at low temperature separated by a small radial gap from the coupling ring, the coupling ring being of a lower coefficient of thermal expansion than the coupling ring so that when a temperature of the strain-relief ring is above a predetermined threshold temperature the strain-relief ring swells radially and frictionally engages the coupling ring, the strain-relief ring being axially operatively coupled to the stator seal.

32. (previously presented) The coupling defined in claim 31 wherein the stress-relief ring has a radially projecting rim axially operatively engaged with the stator seal.

33. (previously presented) The coupling defined in claim 31, further comprising

spring means urging the stress-relief ring axially toward the strain element.